

Amendments to the Figures:

The attached replacement sheet of drawings includes changes to Fig. 2A and replaces the original sheet including Fig. 2A.

In Figure 2A, the label number 10 is replaced with 110 to label the syringe.

Attachments following last page of this Amendment:

Replacement Sheet (1 page)

Annotated Sheet Showing Change(s) (1 page)

## REMARKS

In response to the Office Action mailed August 23, 2007, Applicants amended claims 1, 21, 22, 54, 56, and 58, cancelled claim 55. Claims 1-4, 6-17, 19-31, 49-54, and 56-59 are pending, with claim 16 withdrawn from consideration.

Applicants submit herewith a replacement drawing sheet that corrects a typographical error. Applicants also submit a copy of the original drawing sheet, showing the correction marked in red.

The Examiner rejected independent claim 1 and its dependent claims 2-4, 6-17, 19-20, 23-31, and 49-53, and independent claim 54 and its dependent claim 59 under 35 U.S.C. §112, ¶ 1 (enablement). Applicants amended the claims to obviate the rejection, so the rejection should be withdrawn.

The Examiner rejected claims 15, 17, and 20 under 35 U.S.C. §112, ¶ 1 (written description). Applicants amended independent claim 1 that claims 15, 17, and 20 depend from to obviate the rejection, so the rejection should be withdrawn.

The Examiner rejected independent claim 1 and its dependent claims 2-4, 6-17, 19-31, and 49-53 under 35 U.S.C. §112, ¶ 2 (indefinite). Applicants amended claim 1 to obviate the rejection of claims 1-4, 6-17, 19-31, and 49-53, so the rejection should be withdrawn.

The Examiner rejected claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31 and 49-59 under 35 U.S.C. § 103(a) as being unpatentable over Jacobsen et al., US 6,530,943 ("Jacobsen") and Greene et al., US 2002/0177855 ("Greene"), in view of Smith et al., US 5,888,930 ("Smith").<sup>1</sup> As amended, claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31, 49-54 and 56-59 cover compositions that include particle chains having at least two connected particles and a link that connects the at least two connected particles. At least one of the at least two connected particles has an interior region with pores having a mean size and a surface region with pores having a mean size, where the mean size of the pores of the interior region is greater than the mean size of the pores of the surface region.

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<sup>1</sup> Applicants cancelled claim 55, so the rejection of this claim should be withdrawn.

Without conceding that such would be the case, even if one skilled in the art would have somehow been motivated to try to combine the teachings of these references, the result would not have been the subject matter covered by claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31, 49-54 and 56-59 for at least the following reasons.

The Examiner asserted that Jacobson discloses a particle chain. Without conceding that such is true, even if Jacobsen could be construed as disclosing a particle chain, Jacobson does not disclose how to make his particle chain. Instead, Jacobson only discloses the various shapes of the particle chains and their components, which are the particles or the beads. (See, e.g., Jacobsen, FIGS. 4-8, col. 9 line 22 to col. 10 line 28, FIGS. 9-11, and col. 10 line 35 to col. 11 line 8.) Further, there is no suggestion to combine Jacobsen and Smith, and, even if such a suggestion existed, there is no disclosure or suggestion regarding how the particle chain disclosed in Jacobsen could be modified to include the particles disclosed in Smith. Moreover, Greene's methods of making his embolization device are not compatible with Smith's methods of making his beads. Greene's methods involve putting a polymer member in a tubular holder followed by coaxially skewering the polymer member with the filamentous carrier, or disposing a filamentous carrier in a mold followed by transferring polymer under pressure into the mold. (See, e.g., Greene, paragraphs [0021] through [0024].) In contrast, Smith makes his particles by spraying droplets of a polymer solution into a precipitation bath and dry the droplets to form individual beads. (See, e.g., Smith, col. 3, lines 60-67 and col. 4, lines 50-53.) Thus, one skilled in the art would not have been motivated to try to combine the references in the manner suggested by the Examiner, and, even if one skilled in the art had been so motivated, the references would not have enabled the person to make the subject matter covered by claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31, 49-54 and 56-59. It is well established, however, that, for the prior art to render the subject matter covered by a claim obvious, the prior art must enable one skilled in the art to make and use the subject matter. (See, e.g., Beckman Instruments, Inc. v. LKB Produkter AB, 892 F.2d 1547, 1551 (Fed. Cir. 1989).

Similar arguments as presented above were made in response to the Office Action mailed April 4, 2007. In response to Applicants' arguments, the Examiner stated:

...Jacobsen teaches that the fixed beads may be integrally formed on the material of the filament (page 4, lines 23-24 and claim 25). The entire thrust of the Jacobsen patent is focused on interconnected miniature beads, and thus it is interpreted, in the absence of evidence to the contrary, that one of ordinary skill in the art must be capable of preparing such a linear of interconnected beads which are integrally formed on the material of the filament.

Applicants disagree with the Examiner on this issue. Further, the Examiner failed to address all other arguments that Applicants made regarding the prior rejection under 35 U.S.C. § 103(a) based on the combination of Jacobsen, Greene and Smith. Should the Examiner wish to maintain the prior rejection, Applicants believe the Examiner is required to address each argument raised by Applicants.

None of Jacobsen, Greene, or Smith, alone or in combination discloses or suggests the subject matter covered by claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31, 49-54 and 56-59.<sup>2</sup> There is no suggestion to combine these references to provide such subject matter, and, even if the references were combined, the result would not be the subject matter covered by these claims. Accordingly, Applicants request reconsideration and withdrawal of the rejection of claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31, 49-54 and 56-59 under 35 U.S.C. § 103(a) as being unpatentable over Jacobsen and Greene, in view of Smith.

The Examiner rejected claims 1-4, 6-15, 17, 19-26, 28-31, and 49-59 under 35 U.S.C. § 103(a) as being unpatentable over Jacobsen and Greene, in view of Smith, and in further view of Mazzocchi et al., US 6,605,102 ("Mazzocchi"). For the reasons noted above, the combination of Jacobsen, Greene and Smith does not render the subject matter covered by claims 1-4, 6-15, 17, 19-26, 28-31, 49-54 and 56-59 unpatentable under 35 U.S.C. § 103(a). Mazzocchi does not cure the deficiencies of these references, at least because Mazzocchi does not disclose or suggest the compositions including the particle chains as covered by these claims, and certainly does not disclose or suggest how to make such particle chains. None of Jacobsen, Greene, Smith or Mazzocchi, alone or in combination discloses or suggests the subject matter covered by claims 1, 2, 8, 9, 15-17, 19-23, 25, 26, 28-31, 49-54 and 56-59. There is no suggestion to combine these

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<sup>2</sup> Applicants cancelled claim 55, so the rejection of this claim should be withdrawn.

references to provide such subject matter, and, even if the references were combined, the result would not be the subject matter covered by these claims. Applicants therefore request reconsideration and withdrawal of this rejection.

The Examiner rejected claims 1-7, 15, 17, 19, 21, 22, 25-31, and 49-59 under 35 U.S.C. § 103(a) as being unpatentable over Jacobsen in view of Mangin, WO 01/66016 ("Mangin").<sup>3</sup> Claims 1-7, 15, 17, 19, 21, 22, 25-31, 49-54 and 56-59 cover compositions that include particle chains having at least two connected particles and a link that connects the at least two connected particles. At least one of the at least two connected particles has an interior region with pores having a mean size and a surface region with pores having a mean size, where the mean size of the pores of the interior region is greater than the mean size of the pores of the surface region. Neither Jacobsen nor Mangin, either alone or in combination, discloses or suggests such particle chains. Jacobsen discloses a particle chain, but, as explained above, he does not disclose how to make his particle chain. Mangin does not disclose or suggest particles that are included in a particle chain. Instead, Mangin discloses an embolic particle that has voids present within the particle as well as on the surface of the particle, where the surface region has both large pores and small pores (See, e.g., Mangin, FIG. A), and the interior region also has both large pores and small pores (See, e.g., id, FIG. B). Mangin certainly does not explicitly or inherently disclose an embolic particle having an interior region with pores having a mean size and a surface region with pores having a mean size, where the mean size of the pores of the interior region is greater than the mean size of the pores of the surface region, and there is no suggestion to modify Mangin to provide such a particle. Thus, neither Jacobsen nor Mangin, alone or in combination, discloses or suggests the subject matter covered by claims 1-7, 15, 17, 19, 21, 22, 25-31, 49-54 and 56-59. There is no suggestion to combine these references to provide such subject matter, and, even if the references were combined, the result would not be the subject matter covered by these claims. Accordingly, Applicants seek reconsideration and withdrawal of the rejection of these claims.

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<sup>3</sup> Applicants cancelled claim 55, so the rejection of this claim should be withdrawn.

Applicants believe the application is now in condition for allowance, which action is requested.

Please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 01194-459001.

Respectfully submitted,

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